

THE AMERICAN GENERA OF ASILIDAE (DIPTERA): KEY
FOR IDENTIFICATION WITH AN ATLAS OF FEMALE
SPERMATHECAE AND OTHER MORPHOLOGICAL DETAILS
III. KEY TO THE GENERA OF TRIGONOMIMINAE
ENDERLEIN, WITH DESCRIPTION OF A NEW GENUS AND
SPECIES¹

Los géneros americanos de Asilidae (Diptera): Clave para su identificación con un atlas de la espermateca de las hembras y otros detalles morfológicos. III. Clave para los géneros de Trigonomiminae Enderlein, con la descripción de un nuevo género y especie.

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ABSTRACT

A key for the identification of the 6 American genera of Trigonomiminae Enderlein: *Bromleyus* D.E. Hardy, *Haplopogon* Engel, *Holcocephala* Jaennicke, *Meliponomima* gen. n., *Orrhodops* Hull, and *Seabramyia* Carrera is presented, with illustration of spermathecae and other morphological details. *Meliponomima martensis* gen. n., sp. n. (type-locality: Brazil, Rio de Janeiro, Doña Marta) is described.

RESUMEN

Se presenta una clave para la identificación de los 6 géneros americanos de Trigonomiminae Enderlein: *Bromleyus* D.E. Hardy, *Haplopogon* Engel, *Holcocephala* Jaennicke, *Meliponomima* gen. n., *Orrhodops* Hull, *Seabramyia* Carrera, con ilustraciones de espermatecas y otros detalles morfológicos. Se describe *Meliponomima martensis* gen. n., sp. n. (localidad-tipo: Brasil, Rio de Janeiro, Dona Marta).

KEYWORDS: Insecta. Taxonomy. America. Key. Asilidae. Trigonomiminae.

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INTRODUCTION

This is the part III of a series of papers intended as a preliminary effort to define the American genera of Asilidae, describing the new genera, preparatory to the elaboration of catalogue of Neotropical species for inclusion in the forthcoming World Catalog of Flies, now being prepared by the U.S. Department of Agriculture and U.S. National Museum of Natural History, Washington, D.C.

We have adopted a classification of the Asilidae in 8 subfamilies. The classification is, as all classifications, purely artificial, and designed only to facilitate identification. It follows, basically, the classification adopted by Papavero (1973), with the elevation of the Stichopogoninae to subfamily rank, and the Apocleinae Papavero are included within the Asilinae. The Leptogastrinae are considered as a subfamily of Asilidae. In morphology and terminology we have followed J.F. McAlpine 1981.

The material used in this series be-

KEY TO THE AMERICAN GENERA

1. Antenna with three flagellomeres..... 2
Antenna with 1 or 2 flagellomeres..... 4
- 2(1) Minute (4-6 mm) flies. Mesonotum and scutellum almost bare, without bristles, at most some scanty short hairs. Ocellar tubercle with enlarged ocelli and both prominently protruded forward from the eye margin. Cell cup closed. Female terminalia without spines (Fig. 8). Spermathecae as in Fig. 9. (Nearctic, Palearctic)..... *Haplopogon* Engel, 1930
Larger (9-10 mm) flies. Mesonotum and scutellum either with numerous long bristles or abundant long hairs, especially on posterior slope of mesonotum. Other combination of characters (Neotropical)..... 3
- 3(2) Robust, meliponid-like flies. Scutellum without marginal bristles, only with sparse hairs both on disc and margin. Mesonotum not semicircular in lateral view, densely and longly pilose; dorsocentral bristles, if present, undistinguishable from long pilosity. Abdomen broad, more or less flattened, at level of tergite 3 broader than thorax. Tibiae with dense pilosity, hind tibiae and tarsi inflated, usually slightly, thicker than femur (Fig. 5). Female terminalia with spines. Wing venation as in Fig. 2 (Brazil: Río de Janeiro)..... *Meliponomima* gen. n.
Slender flies, not resembling meliponid bees. Scutellum with at least 2 marginal bristles, no hairs on disc. Thorax strongly arched, semicircular in lateral view and almost bare; dorso central bristles well developed on mesonotal declivity. Abdomen slender, narrower than thorax. Tibiae without conspicuous dense pile. Female terminalia with hairs. Venation as in Fig. 1. Sper-

longs to the Museu de Zoología da Universidade de São Paulo, Brasil, and to the Departamento de Zoología, Universidad de Concepción, Chile (MZUC).

The methodology employed in the dissection and preservation of the male terminalia, female spermathecae and other morphological details is the same employed by Artigas (1971).

Our best thanks go to the Fundação de Amparo à Pesquisa do Estado de São Paulo and to the Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq); without their generous support this research could not have been undertaken.

Subfamily TRIGONOMIMINAE Enderlein

Trigonomimini Enderlein, 1914: 166.
Xenomyzini G.H. Hardy, 1948: 116.
Damalini Hull, 1962: 51.

- mathecae as in Figs. 6-7. (Brazil: southern states).....
..... *Seabramyia* Carrera, 1958
- 4(1) Antenna with first flagellomere, elongate, spindle-shaped, two or more times combined length of scape and pedicel. Second flagellomere thick, elongate, variable in length, but never more than half length of first. Male aedeagus with three prongs. Spermathecae as in Figs. 10-11 (Neotropical).....
..... *Holcocephala* Jaennicke, 1867
Antena with first flagellomere extremely short, small, dilated, bulb-like, drawn out apically into an extremely long, bristlelike style, longer than the head (Nearctic) 5
- 5(4) First flagellomere twice as long as combined length of scape and pedicel and, pollinose. Frons without longitudinal sunken area. Face divergent below. Head, in lateral view, rounded below antennae and obliquely flattened above, the facial crease specially deep. Abdomen short and oval. The distally dilated hind femur with a dense brush of fine hairs. Upper section of M_2 very short or fused to M_3 . (USA: Arizona, México) *Orrhodops* Hull, 1954
First flagellomere short, nearly orbicular, considerably larger and wider than pedicel. Frons with a longitudinal sunken area and upper face with a longitudinal furrow. Mesonotum very densely pilose, the pile virtually concealing the ground color. Upper section of vein M_2 long. (USA: Arizona).....
..... *Bromleyus* D.E. Hardy, 1944

Meliponomima gen. n.

Face 1/4 width of head, as wide as frons. Facial gibbosity rounded, beginning at antennal base. Ocellar triangle with bulgins ocelli appearing as three tubercles. Mystax occupying entire facial gibbosity, bristles on upper part shorter, those of lower third directed downwards. No frontal hairs or bristles and ocellar bristles short and weak. Postvertical and postocular area with abundant hairs and bristles. Antennae implanted on upper third of face; scape and pedicel subequal in length, both with bristles longer than their length; firts flagellomere long, twice as long as combined length of scape and pedicel, devoid of hairs and bristles, slightly compressed; second flagellomere minute, third one tapered, nearly 1/5 length of firts, with a fine spine on tip. Proboscis short, cylindrical, stout. Palpus two-segmented, apex of second segment rounded. Figs. 3 and 4.

Pronotum with abundant bristles.

Prosternum narrowly united to proespisternum. Mesonotum with abundant short hairs and bristles, longer on postsutural area. No distinct bristles on humeri; 4 strong prealar bristles, stronger than other bristles on mesonotal borders. Scutellum inflated, with long scattered hairs on disc and margin, but no distinct marginal bristles. Pleura with abundant hairs and bristles.

Femora and tibiae thickened, hind tibia thicker than corresponding femur and strongly pilose, hind basitarsus thicker than remainder tarsomeres (Fig. 5). Claws acute. Pulvilli long.

Wing as in Fig. 2.

Abdomen short, broad, wider than mesonotum, subcompressed, tegument smooth, shining, 8 visible tergites on female (male unknown). Ovipositor mostly telescoped, strong spines on tergite 10. Type-species: *Meliponomima martensis* sp. n.

Meliponomima martensis sp. n.

Female. Total length, 9 mm; wing length 9 mm.

Face (Figs. 3 and 4) covered by yellowish micropilosity around facial gibbosity, the latter shining black at center, as frons, vertex and postvertex. Mystax with fine, short, dark hairs on upper half, lower half with long reddish-brown bristles directed downwards. Antennae dark brown, scape and pedicel with black bristles, and flagellomeres concolorous. Postvertical and postocular bristles reddish-brown, exactly of the same color of beard, proboscis and palpus.

Pronotum shining black, with white bristles and reddish-brown hairs; similar vestiture on proepisternum. Mesonotum mostly shining black, dark reddish-brown in post-humeral area. Humeri shining red. Silver micropubescence on scattered areas on sides of the well defined, black, central band of mesonotum; vestiture of latter of fine short reddish-brown hairs, presutural dorsocentral bristles indistinct, postsuturals longer; 4 black supraalar bristles. Scutellum inflated, shining black, with scattered fine reddish-brown hairs. Pleura with black

hairs and areas with silver micropubes-

cence. Legs (Fig. 5) reddish-brown with abundant hairs and bristles of same color, tarsi less pilose than femora and tibiae; the thick hind tibia with abundant hairs, longer on dorsal side, and a row of 5 black bristles on external side of hind tibial apex.

Wing reddish-brown, lighter on anal area and towards apex (Fig. 2).

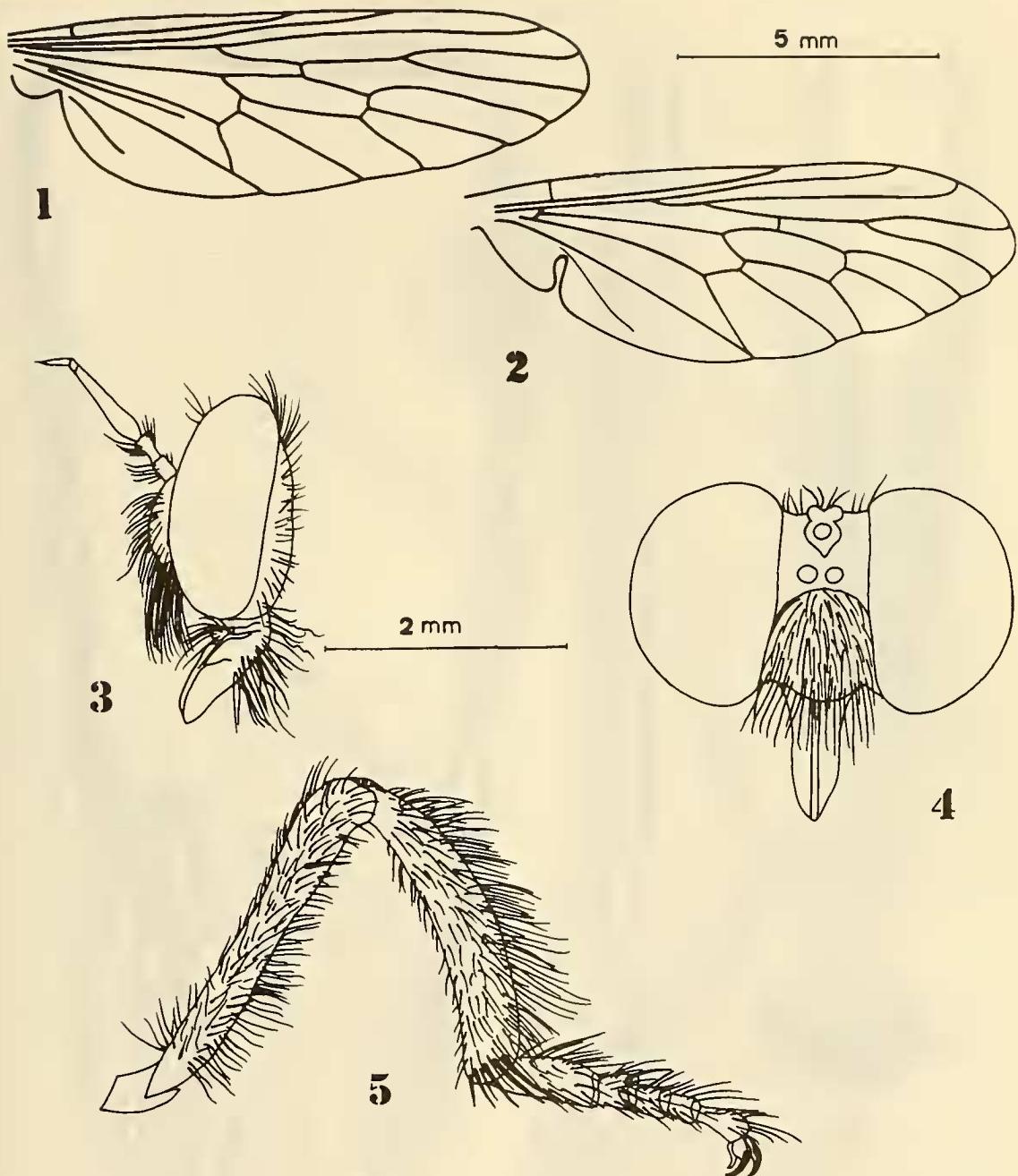
Abdomen smooth, shining, broad, basal tergites dark, tergite 5 and following lighter, apex yellow, vestiture dark brown on basal segments, light brown and yellow on remaining, the hairs short and scattered on dorsum and longer laterally on sternites and on segments 6-8. Ovipositor telescoped, the black apical spines contrasting strongly with the light yellow color of the last segment and hairs.

Male unknown.

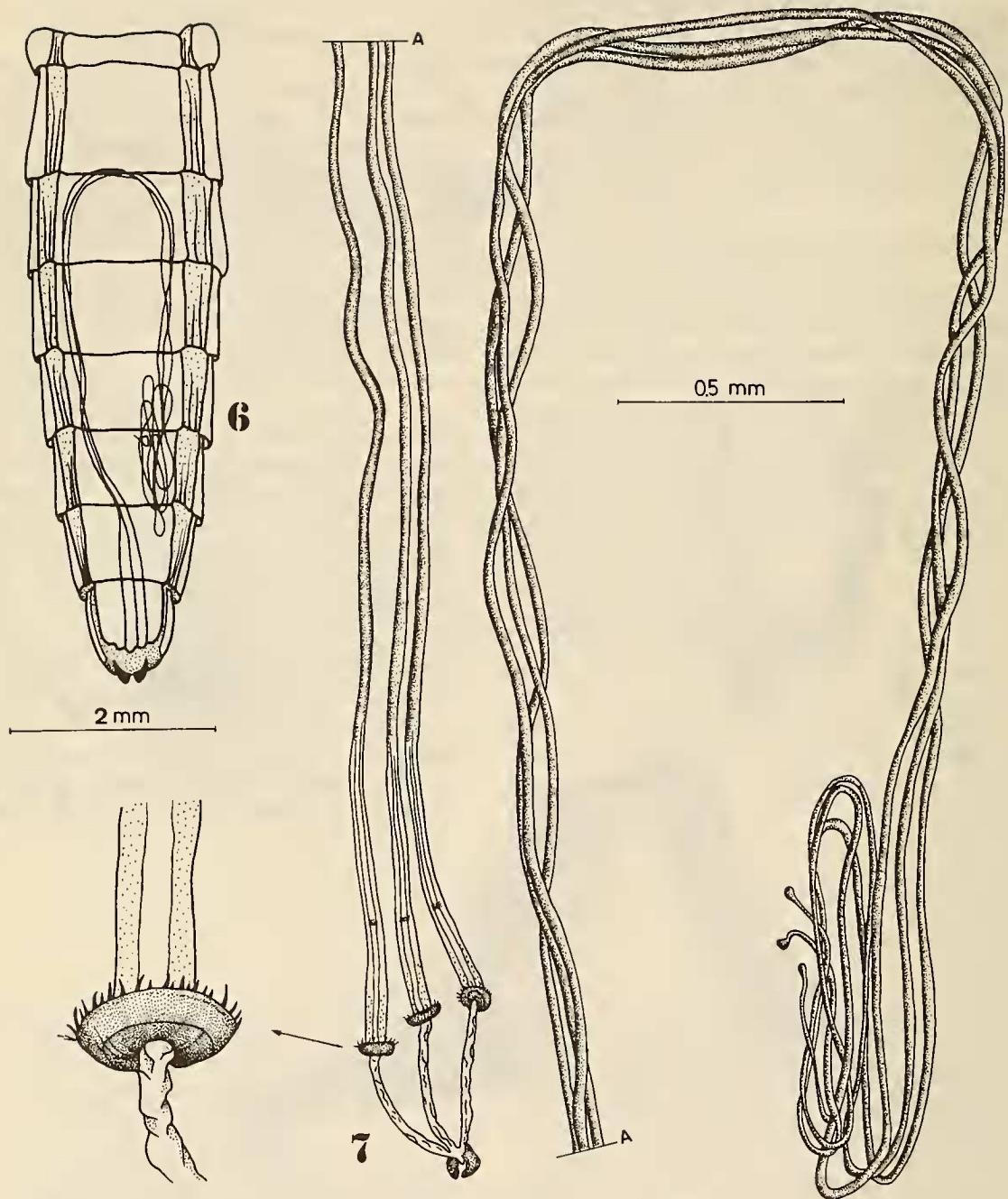
Holotype female, BRAZIL, Rio de Janeiro: Dona Marta, 14.X.1957 (Alvarenga), and paratype female, Brazil, Rio de Janeiro: km 47 da Estrada Rio-Sao Paulo, 13.VIII.1951 (W. Zikán), in the Museu de Zoologia da Universidade de São Paulo.

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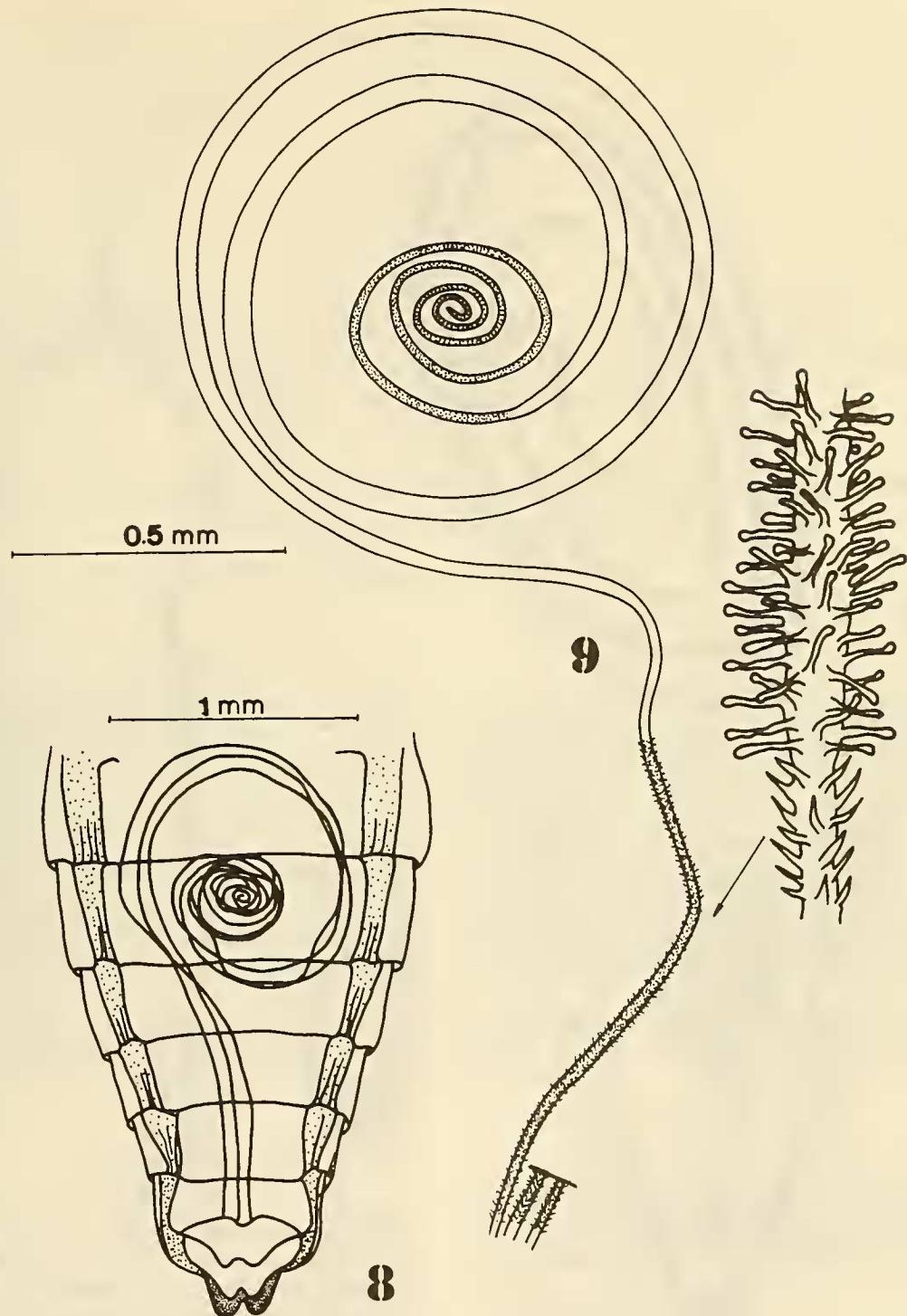
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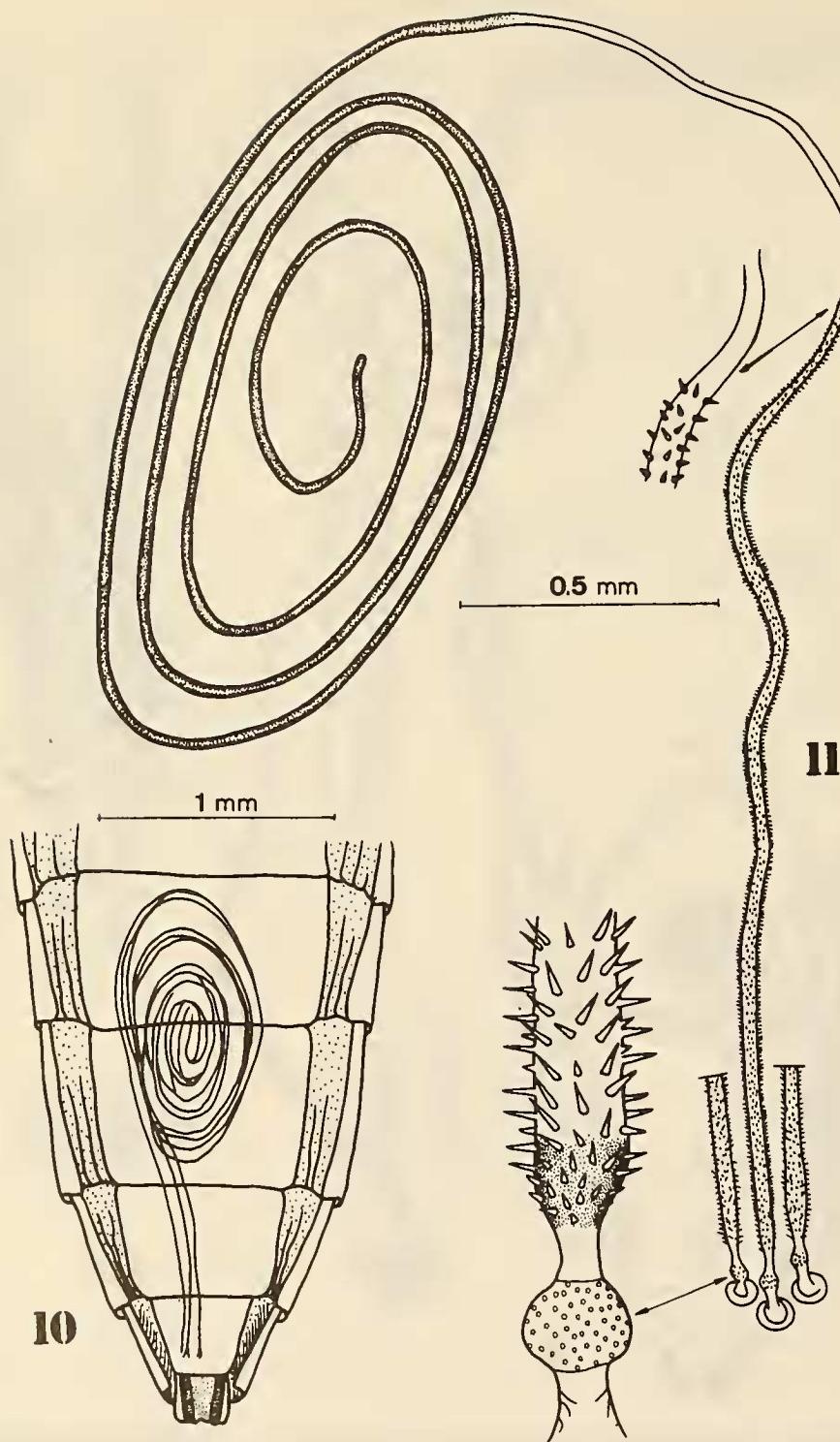
Figs. 1-5. *Seabramyia tijucana* Carrera, 1.wing. *Meliponomima martensis* gen.n., sp.n., 2.wing. *Meliponomima martensis* gen.n., sp.n.: 3.head lateral view; 4.head, frontal view; 5.hind leg.



Figs. 6-7. *Seabramyia tijucana* Carrera: 6, situation of the spermathecae in the abdomen; 7, spermathecae.



Figs. 8-9. *Haplopogon erinus* Pritchard: 8. situation of the spermathecae in the abdomen; 9, spermathecae.



Figs. 10-11. *Holcocephala abdominalis* (Say): 10. situation of the spermathecae in the abdomen; 11. spermathecae.